

AMENDMENTS TO THE SPECIFICATION

Please replace the first paragraph on page 5 as follows:

EcoR I and *BamH* I restriction sites are added to the two ends of SAK gene, respectively. The SAK gene without the stop codon is introduced in the vector pBV220, resulting in pBVS_{AK}. By PCR method, the *BamH* I restriction site and the sequence coding FXa recognition sequence GSIEGR are incorporated upstream of hirudin gene via a primer (5'-CG GGA TCC ATC GAA GGT CGT ATT ACT TAC ACT GAT TGT ACA GAA TCG-3'). (SEQ:1) The primer matched with downstream of the hirudin gene contains a *Pst* I restriction site. The hirudin gene with a FXa recognition sequence GSIEGR is digested by two enzymes of *BamH* I and *Pst* I, and the above vector pBVS_{AK} is also digested by *BamH* I and *Pst* I. The digested hirudin fragment is inserted into the digested vector pBVS_{AK} to form plasmid pBV_{SFH} (see Figure 1). Said two gene fragments can also be linked by overlapping PCR method. The plasmid pBV_{SFH} is transformed into *E. coli*, and induced to express at 42°C. The desired fusion protein (SFH) is obtained by ion exchange and gel filtration method in a purity of more than 96%. The SFH fusion protein comprises three domains, a SAK sequence, FXa recognition sequence GSIEGR and hirudin. The amino acid sequence of SFH fusion protein is as follows:

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1      sssfdkgkyk kgddasyfep tgpylmvnvt gvdgkgnell sphyvefpik
61     pgttlteki eyyvewalda taykefrvve ldpsakievt yydknkkkee
101    sfpitek gfvvpdlsehi knpgfnlitk viiekkgsie gritytdcte sgqdlclceg
161    snvcgkgnkc ilgsngeenq cvtgegtpkp qshndgdfee ipeeylq (SEQ:2)
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